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THE IMPORTANCE OF THE EARLY DIAGNOSIS OF HIP DISEASE.*

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In response to an invitation from the President of this Society, I will present for your consideration and discussion this evening a few facts bearing upon the symptomatology of hip disease.

Hip disease is a term now limited in its application to a tuberculous osteitis of the head of the femur, rarely primarily of the acetabulum or synovial membrane, and extending by contiguity to involve all the joint structures.

The symptoms are so varying with the different clinical types of the disease that they had best be considered separately and relatively in the order of their appearance and aid in diagnosis. In cases beginning insiduously lameness is noticed by the parents before the child begins to complain of any discomfort. The limp may disappear after two or three weeks to return after a varying interval up to three months.

Usually, however, it is slowly progressive until a marked degree of disability exists; as the limp increases there begins a certain stiffness, or restriction of motion, which causes the step to be shorter on the affected side and this restriction is due to reflex muscular spasm. This is an involuntary contraction of the muscles which resists motion when a position is reached which causes joint irritation. It holds the joint firm, causing the pelvis to move with the limb. Though present in all

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forms of joint inflammation, its catchy character and persistence are the strongest points in the diagnosis of hip disease.

In cases beginning more acutely or in those further advanced, this element firmly holds the limb and all motion is restricted. Even then upon manipulation, which should always be undertaken with greatest gentleness, the sharp, quick action of the muscles is elicited.

The two motions liable to be first restricted are hyperextension and rotation. Hyperextension is tested with the patient lying face downward and the knee should normally be free to move upward through an arc of 20° .

During any manipulation one hand should steady the pelvis, motion of which causes false motion of the limb, will then be quickly detected.

Among the early symptoms is atrophy of the affected limb. This is partly due to trophoneurotic disturbance but likely in greater part to disease. The thigh is always more affected than the calf. The thighs are measured by taking a point on each side at the same distance from the corresponding anterior-superior spines while the knee and calf are measured at their largest circumference. Gluteal atrophy is made evident by prominence of the trochanter.

Shortening of the limb is usually present after the early months and gradually increases.

But very little shortening is the result of bone destruction, bone atrophy and migration of the acetabulum accounting for the major part. The obliquity of the neck of the femur and the fact that almost all the growth of the femur is derived from the lower epiphesis readily explains how small is the effect of slight bone destruction.

The foot always shares in the atrophic process, being much shorter than its fellow in the late stages. In mild cases in which the epiphesis is simply congested and not destroyed its increased activity may produce a small amount of lengthening. Night cries occur only when the disease is moderately severe and are more frequent during the early part of the night. The vigilance of the muscles is not so acute owing to complete inaction, and a slight movement causes them to resume their watch contract sharply and force the diseased parts together, thus causing pain.

In the milder cases the child cries out quickly but does not always awaken.

If the process is very acute the pain may continue for five or ten minutes. The essential character is that it is produced suddenly and has the note of pain.

Night cries signify joint pain, but under conditions of non-protection and are always referred to the joint.

The typical pain of early hip disease is at the knee usually at the

inner side. This is explained by the fact that both joints have the same nerve and the pain is reflected or is reflex in character.

Sometimes it is quite severe and causes the knee to be the object of treatment until the local signs become more marked. It should be insisted upon as a routine measure to examine the entire limb if there is pain in any part, and it may be well at this point to emphasize the importance of removing all the clothing whenever the child complains of any defect of locomotion. The seat of the disease may be anywhere from the foot to the brain and in more than a single location. An incomplete examination is very often fruitful of serious and in great part preventable disability or deformity.

Local pain never begins until the process extends from the bone to the joint-structures. If the joint is protected and pain is progressive and persistent it most often signifies joint effusion or burrowing of an extra-articular abscess. Fever is not present early unless the case is one of the rapidly destructive type resembling an infectious process when it may reach 104°-105°F. Ordinarily the evening rectal temperature is about 100° F. Even abscess formation very often produces but little rise of temperature. Open sinuses cause more fever than a closed abscess. Changes in the ilio-femoral and ilio-gluteal folds are simple sequences of the attitude of the limb.

Hip disease is usually divided into three stages according to deformity. This may be possible in untreated cases but treatment causes various conditions. To determine the amount of deformity the patient lies on the table with the symphysis pubis, umbilicus and supra-sternal notch in the same line and with the pelvis level at right angles to this line. Then if the lumbar spine is arched raise the limb until the back is in contact with the table and the position then occupied by the limb represents its distortion. The usual position in a painless case is abduction, flexion and outward rotation or the position of the rest. If the process is acute and painful the limb assumes the position of greatest protection which is adduction, flexion and inward rotation.

Under treatment almost any position may be produced according to the lines of pressure and traction employed. Patients recover with any of the distortions but most severe or neglected cases have adduction and flexion. This is easily explained mechanically. If muscular spasm has been marked intrajoint pressure will have been great and the part most affected by the pressure is the upper rim of the acetabulum. This becomes worn away and absorbed until the socket is above and behind its former site. It is now a dorsal dislocation and presents the typical deformity with exaggerated adduction due to total or partial loss of the head of the bone. The muscles become

structurally shortened and make the deformity more resistant. Thus deformity is something against which we should direct the treatment as well as subsidence of the inflammation. Comparatively late the trochanter is found above Nelaton's line, but this is due in slight degree only to bone destruction. It is mostly due to migration of the acetabulum just considered.

An abscess may be present early in the acute form but only after some months, if at all, in the milder cases.

Secondary accumulation of pus may occur, which is nearly always due to poor drainage or mixed infection through the previous sinus tracts.

When looking for fluctuation we should never omit to turn the patient face downward and palpate just behind the trochanter where a fullness sometimes can be felt even before the capsule has ruptured.

When an abscess points in the adductor region or above the crest of the ilium it is strongly indicative that the acetabulum is perforated.

Of the group of symptoms the earlier are the ones upon which we must formulate our opinions.

To recapitulate briefly these earlier ones are the limp perhaps intermittent or may be gradually progressive; increasing stiffness or restriction of motion due to reflex muscular spasm by all means the most important symptom.

Pain usually referred to the inner side of the knee. Early atrophy of the muscles of the limb; night cries, postural deformity of the limb, and, perhaps, early shortening.

ECTOPIC GESTATION.*

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When the impregnated ovum is arrested and developed outside of the uterine cavity, such a conception is designated as Ectopic Gestation.

When such an unfortunate state of affairs exists, it is due to the fact that the generative apparatus is out of gear. LeCoste declared extra-uterine pregnancy to be peculiar to women, but Adams, (Boston Medical Journal, 1873 has met with extra uterine conception in a deer. It has also been observed in a bitch, cow, sheep and horse. (Campbell's Memoir, Page 3).

Among the factors which lead to the arrest and development of the fecundated ovum in erratic pregnancy are moral and mental influences. Mechanical obstruction of the Tubes, such as polypi, desquamative salpingitis pressure from the outside encroaching upon

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and obliterating the caliber of the tube and uterine displacements.

Astruc believed ectopic gestation to be more frequent among widows and young girls indulging in hymeneal pleasures than it is among married women. "Cavasse says it is a singular fact that more single women labor under erratic pregnancy than married. Ramsbotham and Burdock were of this opinion also. According to Parry, age does not seem to exert much influence in causing this accident. Of the five hundred cases of ectopic gestation analyzed by him, he found the youngest fourteen years of age and the eldest forty-seven at the time of conception occurred. Misplaced conception is liable to occur at any time during the child-bearing period, but it is more likely to happen after twenty and the liability increases up to thirty years of age.

It is asserted by some writers that the fimbriated end of the tube grasps the ovary during ovulation.

There are two theories as to how and where fertilization takes place. One is that the spermatazoa traverses the uterus then through the tube to the ovary. There impregnation of an ovum is consummated and the fecundated ovum is then passed through the oviduct by the ciliary epithelial lining of the fallopian tube to the uterine cavity where it attaches itself and is developed.

The theory adhered to by Lawson Tait and Locwenenthal is: that the ovum is passed from the ovary by the ciliary bodies lining the tube, aided by the vermiform movements of the oviduct on to the uterus where it is met and fertilized by the spermatazoa which are endowed with independent powers of motion. This ciliary wave or motion is always in the direction of the uterus and serves as a sleepless sentinel guarding the entrance of the tube against the invasion of the "Spermatazoa" (Lawson Tait, E. U. P.)

A "Spermatazoon" is about 1-500 of an inch in length and possesses a power of motion variously estimated; according to Henle its own length in a second; one inch in seven and one half minute. J. Marion Sims says it can travel from the hymen to the neck of the womb in three hours. Tait claims that if the tube is deprived of the ciliary epithelial lining by desquamative salpingitis or what-not, then the spermatazoa are free to enter the tube just so far as the ciliary bodies are destroyed and there wait for and impregnate the ovum. The fecundated ovum attaches itself to the walls of the oviduct and tubal gestation is the result. Dr. Griffith, of St. Bartholomew's Hospital, has worked out and proven that desquamative salpingitis exists and thoroughly agrees with Tait in his conclusions in regard to this trouble. In two cases of tubal gestation examined by Prochownik he found a gonorrhoeal history in three cases, and in one of these cases there was acute gonorrhoeal affection of the pregnant tube.

Moskowitz found in one case tuberculosis was the etiological factor and in another, gonococci and staphylococci were present in the pyosalpinx of the now pregnant tube.

Dr. Howard A. Kelley says, "Although at first sight a 'Migration' (?) of the ovum appears difficult to explain, my observations at the operating table lead me to believe that it may be of tolerable frequent occurrence under ordinary conditions, for I have repeatedly found tubes and ovaries lying low down behind the uterus with the fimbriated extremity of the right tube in contact with the left ovary and vice-versa. In one instance I removed the diseased ovary on one side, the diseased tube on the other, leaving behind only the right tube, the left ovary. Pregnancy occurred a short time afterwards and the patient was delivered at term. At a later period extra-uterine pregnancy occurred and I was obliged to remove the remaining tube. "The corpus luteum is formed the same in erratic gestation as in normal pregnancy and has been found in the ovary on the opposite side from the gravid cyst. When this strange thing occurs Oldham says "The tube of the opposite side and the one in which the ovum is finally developed reaches entirely across the pelvic cavity and grasps the ovary from which the germ is liberated. Farre saw in the anatomical museum of Cambridge, a pathological specimen in which both tubes are simultaneously grasping the same ovary to which they have been attached by adhesion. In a case of combined tubal gestation and uterine pregnancy reported by Sager he says that both corpora lutea were found in the right ovary while the gravid cyst was found in the left tube. The right tube was normal except its fimbriated extremity was bound down by adhesions. Kussmaul has asserted that it is not necessary for the fimbriated extremity and the ovary to be brought together in order that the tube should receive the ovule." He believes that the germ has to traverse a portion of the peritoneal cavity in order to reach the oviduct. If the fimbriated extremity of the tube does not grasp the ovary during ovulation, how does the ovum get into the tube? Doubtless numerous ovules drop from the ovaries into the peritoneal cavity and are absorbed without the slightest disturbance to the health or well-being of the patient.

When hysterectomy is done and the normal ovaries left in situ there's no doubt that ovulation continues for M. Koeberle did an hysterectomy for fibroid leaving the ovaries and cervix; there was a fistula through the cervix communicating with the abdominal cavity through which spermatozoa passed and impregnation resulted. The pregnancy went to term, the patient dying undelivered.

The fallopian tube is capable of great distention. Peaslee reports a case of the tube dilated to such great extent that it contained thirty

pounds of fluid. Mr. Lawson Tait saw a case in which there were thirteen or fourteen ounces of fluid in the tube.

It is a well established fact that rupture in tubal gestation is not due to the rapid distention of the tube, but to pathological changes. The Chorion villi are attached to and pierce the mucous lining of the tube and encroaching on and weakening the muscular coat, thereby causing rupture. The site of the placental attachment has a great deal to do with determining the site of the rupture and the site of the rupture decides the fate of the foetus and often that of the mother. In 1889 Tuttle reported twelve authenticated cases of tubal pregnancy carried to term.

It is claimed by Tait that all extra-uterine pregnancies were originally tubal and that the varieties were determined by the site of development of the gravid cyst. If the ovum is arrested and developed in the fimbriated extremity of the tube it is ampula, if it is arrested and developed in the end of the tube containing uterine tissue it is interstitial or tubo-uterine pregnancy. The interstitial variety is very rare. A. Martin only found one case in seventy-seven cases of ectopic gestation. Dr. Howard A. Kelley has never seen an interstitial or ovarian pregnancy. Greig Smith says "Most men are now agreed as to the truth of Tait's opinion, that all examples of extra-uterine pregnancy are in the beginning either wholly or partially fallopian. Schlechtendahl reported a case of primary abdominal pregnancy the gravid cyst being the size of the fist and containing a fetus fifteen centimeters long and was situated between intestinal loops which were adherent to the spleen. The tubes and uterus were normal. Kelley reports a case of pregnancy in the left rudimentary horn of the uterus in which rupture and death occurred; the specimen showed the corpus luteum was on the right side opposite to the pregnancy. The left tube was a solid cord and the only possible explanation of the location of the pregnancy was the migration of the ovum and spermatazoa out through the right side and over into the left by way of the abdominal cavity." (Operative Gynecology, Kelley).

It is now a little more than four hundred years ago since Nufer operated by the abdominal route for ectopic gestation, his operations were done in fifteen hundred and Christopher Bain operated in fifteen hundred and forty upon a suppurating extra-uterine gestation sac which was little more than opening an abscess. Primrose did a coeliotomy in 1594 for erratic pregnancy; his patient again became pregnant.

Tubal pregnancy was first recognized and described by Riolanus, Jr., in his *Anthropographia* published in 1649. He says that in the year 1640 he recognized tubal gestation in the body of a washer-woman in the service of Anne of Austria.

In 1764 Dr. John Bard, of New York, operated for mis-placed conception; this was probably the first operation done in America for ectopic gestation.

In 1791 Dr. William Boynham, of Virginia, successfully removed by the abdominal route an ectopic gestation tumor and again in 1797 he operated by coeliotomy, his patient recovering. (Amer. System Gynecology). McKnight operated for dead fetus in 1795 and Heim operated in 1813. In 1752 Bohmer described the tubal ovarian and abdominal forms of ectopic gestation and in 1801 Schmidt described interstitial pregnancy.

In 1813 Dr. John King, of Edisto, South Carolina, incised the walls of the vagina and delivered through the incision by means of the forceps and abdominal pressure a living child which had been carried to term extra-uterine, saving both mother and child. Dr. T. Galliard Thomas, of New York in 1874, by means of the galvanocautery knife cut through the vaginal walls and removed a three months fetus. Dr. Harper as long ago as 1849 suggested operative treatment for the early rupture of the ectopic gestation sac, but little attention was given to his appeal until 1866-7, when Dr. Stephen Rogers of New York also urged operative interference in these cases. "Up to October 26, 1887, Lawson Tait had operated for early pregnancy thirty-five times, with two deaths. (Greig Smith's Abdominal Surgery.)

Probably the first case of unruptured tubal gestation diagnosed and operated upon in America was done in March, 1886, by Dr. Howard A. Kelley at the Kensington in Philadelphia. The fetal tumor was delivered unruptured. The patient made a good recovery and was delivered at term of a living child by Dr. Kelley in Jan., 1887. A. Martin has shown that 76.7 per cent. out of the five hundred and fifteen cases of ectopic pregnancies recovered under operative treatment; in the hands of a good operator the mortality would not exceed five or six per cent

Lawson Tait, whose operations were done after rupture, had a mortality of little more than five per cent. "Dr. Harris, of Philadelphia, has collected a number of operations done for ectopic gestation with the results as follows: in 74 cases where the fetus was viable, there were nine recoveries, in the first 37 cases, and 28 recoveries in the second 37; and of one hundred cases where the fetus had died after the sixth month, there were twenty-three cases lost out of the first fifty and four out of the second fifty."

Martin found that 65 Multiparae were affected as compared with 20 nulliparae in 85 cases of erratic conceptions. In 100 cases of Kustners, only ten ectopic pregnancies occurred in multiparae; of the remaining 90 cases, 87 had borne children and three had aborted. In

24 cases it had occurred five or more years after the last labor; in 55 cases from one to five years after; and in 8 cases in less than twelve months (Bandler. *American Journal Obstetrics* XLV. 1902).

Gebhart reports nine cases of ectopic gestation occurring in either tube at the same time. "Fenger found two ova in the same tube and Sanger even found a case of triplets, two of which constituted an intramural twin ovum, while the third was lodged in the ampula."

Patelloni has collected 37 cases of ectopic gestation occurring simultaneously with uterine pregnancy. Tubal abortion is the expulsion of the gravid cyst through the fibrated end of the tube into the abdominal cavity and may occur at any time between the second and eighth week of gestation, but the most usual form of the tubal delivery of the misplaced conception is by rupture which may occur at any time between the second and eighteenth week of gestation.

The uterus in ectopic gestation is always enlarged and vascular, and up to the fifth month is usually one-third or one-fifth smaller than in an intra-uterine pregnancy of the same age. The enlargement continues after this stage of gestation, but at a less rapid rate. When rupture occurs if the fetus is destroyed the uterine growth is checked and involution follows, but if on the other hand the ovum continues to grow, the uterus does also, but not very rapidly, not measuring more than from four to six inches at full term. There is a decidua formed in the uterus in misplaced conception and when it is not found it is due to the fact that it has been thrown off. Great care should be exercised in the examination of tissues thrown off by the uterus, for in membranous endometritis where the membrane has been thrown off, might without microscopical examination be mistaken for a decidua. To Boehmerus belongs the credit of first discovering the fact that decidua formed in the uterus in ectopic gestation the same as in normal pregnancy. The decidua may be thrown off entire or in small parts at a time. This often occurs with pain and hemorrhage and may be mistaken for an abortion, especially where the decidua is expelled en masse. Virchow, Kiwisch and Oldham have demonstrated that no decidua occurs in the tube. They claim that this is due to the fact that there is no utricular glands in the mucous lining of the tubes, but Jewet says "That the formation of a decidua in the pregnant tube is now conceded by all competent observers. A number of my own cases have been examined for that purpose and a decidua has been invariably found. It has occasionally been found in the opposite and non-pregnant tube."

The difficulties of diagnosis before rupture are very great and so great an authority as Lawson Tait says, "No authentic description

exists of an unruptured tubal pregnancy." In the early weeks or months of erratic pregnancy the subjective symptoms may be the same as those of normal pregnancy. The patient may suspect that she is pregnant or may not, there may be nausea and vomiting with amenorrhea and mammary changes. Metrorrhagia does not usually occur until rupture or impending rupture is imminent. Rupture is usually preceded by severe cramp-like pains in one or the other iliac regions accompanied by a discharge of deciduous membrane. "The pain becomes more and more severe as the hours advance; the woman presents a strange death-like appearance; she vomits as she lays on her back; the pulse disappears; the skin becomes clammy and cold and though she is clearly dying, there is no very distinct ground upon which you can make your diagnosis and until you can inquire into the history you can be positive of nothing but the pain. Such are the appearances of a woman who is suffering from a rupture of the more common form of ectopic gestation."

Pain in the abdomen of a woman always calls for a special examination and having a case with cramp-like pains and irregular menstruation, nausea and vomiting, syncope and shock, "be she wife, maid or widow, look out for ectopic pregnancy." The pain of a ruptured tubal gestation can only be mistaken for appendicitis, renal or biliary colic, intestinal obstruction or uterine abortion. The interstitial variety or tubo-uterine gestation is the most serious form of ectopic gestation. It gives rise to very few symptoms and where rupture occurs the woman soon bleeds to death within her own abdomen. Tait says, "It is unquestionably a catastrophe so terrible, that nothing can be compared with it short of a railway accident." If rupture occurs in the broad ligament the folds of the broad ligament prevent by the resistance very much hemorrhage; this form of rupture is designated as extra-peritoneal rupture. If the fetus is not destroyed the gestation may continue to term. There may be repeated hemorrhages and if the fetus is not destroyed by the first hemorrhage it usually perishes with the second. Occasionally the sac may break down and suppurate or there may be an intraligamentary hematocele. Upon vaginal examination a sensitive, painful tumor may be readily made out, which is contiguous to and connected with the uterus. When an interstitial pregnancy ruptures it is almost always into the peritoneal cavity and the hemorrhage is so profuse that death is almost immediate. The tear in this form of ectopic pregnancy according to Tait may be four or five inches long and extends often into the fundus of the uterus and the consequent hemorrhage is terrific. Nothing but hysterectomy could possibly be done and before the diagnosis could be made and operation performed the chances of recovery would have passed.

Unfortunately the greater number of ectopic gestation are not seen until rupture occurs. The general practitioner is the one that is often called and he sometimes recognizes the condition at once. Appendicitis, biliary and renal colic, intestinal obstruction and abortion are about the only conditions that might be mistaken for ruptured tubal pregnancy.

The excruciating pain in connection with the collapsed anxious appearance of the patient, the thready pulse, syncope and pallor are sufficient for a diagnosis, even if there is no tumor or uterine enlargement perceptible.

Unfortunately defective clinical histories often make the diagnosis very difficult. Werth says, "That an extra-uterine pregnancy in the early months should be treated as a malignant growth." Kelley says, "That only from the seventh month of pregnancy, when the child is viable that it has any claims to consideration." Werth of course refers to unruptured ectopic gestation, the ruptured demanding immediate attention. The treatment of ectopic gestation consists first in making diagnosis and then operative interference. When shall we operate upon a ruptured ectopic gestation? As soon as a diagnosis is made. The patient's only hope of recovery lies in immediate abdominal section. Arrest of all bleeding by the ligation of blood vessels supplying the sac, its removal and the evacuation of the blood from the peritoneal cavity and through drainage. Often when the abdomen is opened the blood will rush out freely, the hand is introduced into the abdomen and the fundus of the uterus found and the tube traced to the rupture and all bleeding stopped.

The normal salt solution should be used either subcutaneously or direct into a vein, this is very valuable in collapse and is far superior to the hypodermatic administration of stimulants. If time will permit care should be taken to secure an absolutely aseptic condition of the field of operation, of the surgeon, assistants, dressings and instruments. The operation should be done as rapidly as possible consistent with good work and the minimum amount of anaesthetic used. Drainage is of the utmost importance and especially where there are a great many adhesions and the hemorrhage has been profuse. In old cases where there have been repeated hemorrhages with a well defined immovable mass, which can be felt through the vagina, vaginal incision and drainage is as good a plan as by the abdominal route, though I have seen this method fail and the abdomen had to be opened to arrest hemorrhage.

In advanced ectopic gestation operative interference should be delayed until a few days of term or until false labor pains begin, then the fetus with its sac should be, if possible, removed. It is not always possible to remove the placenta and the choice of methods in dealing

with this condition of affairs will depend upon the experience of the operator and the condition of the patient. "It is sometimes necessary to cut the cord off short and stitch the sac wall to the abdominal wall, and drain the sac."

Dr. W. G. McDonald says, "Out of a large number of cases delivered at or about term, the most serious difficulty experienced was in relation to the placenta. Two plans have been suggested; its removal with multiple ligature and tying the cord close to the placenta, closing the abdomen in the hope that subsequent absorption will take place.

Both methods have succeeded and failed. A third plan has suggested itself to me; first, preliminary ligature of the ovarian and uterine artery on the side from which the placenta receives its blood supply; second, the placing of Mickulicz tampon of sterile gauze over the placenta establishing pressure atrophy; third, preliminary suture of the abdominal walls, the sutures to be tied after the removal of the tampon and placenta. Such a tampon may be safely left for three days, and then removed with the placenta and the sutures tied.

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TO WHAT EXTENT SHOULD PHYSICIANS SUPERVISE THE EDUCATION OF OUR BOYS AND GIRLS, WITH SPECIAL REFERENCE TO COLLEGE WORK?

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Mr. President and Gentlemen of the Medical Societies of Clay, Calhoun, Shelby and Talladega counties:

Having devoted much time and attention to the study of this most important subject, and having had under observation and treatment

during the past few years no less than 1700 college women, I feel that I can speak without being accused of pedantry.

In an oration on State Medicine, delivered at St. Paul before the American Medical Association, June 4-7, 1901, Dr. Geo. M. Kober (3) of Washington, D. C., said: "During the year ending June 30, 1900, there were 15,341,220 children enrolled in the common schools of our country. When we consider that the mental and physical vigor of a nation depends upon the environments of childhood and youth, it seems strange that up to within forty years ago little or no attention should have been paid to the hygiene of schools." In an editorial (9) in the *Journal of the American Medical Association* of Oct. 29, 1898, we find the following: "A committee appointed to investigate the public school buildings of one of our most progressive large cities reported over half of them defective and a fourth of them disgraceful. There ought to be a physician on every school board in every town of more than 2,000 inhabitants, as school physician, with salary enough to enable him to devote a substantial share of his time to the study and remedy of these conditions. Nor is this merely one of the 'ought to bes' of the Utopian future. Our most prominent educators are declaring that school hygiene is to be the burning question of the coming quarter century." Let us see what some of our celebrities have to say on this subject. Dr. Julius Norr (11), of Wisconsin, in an article read before the A. M. A. at St. Paul, says: "Mental and physical abnormalities exist in school children, and these abnormalities are always aggravated if indeed they are not produced by pedantic, pseudo-educational methods. Psychologically, mind is immaterial, but physiologically we are forced to the conclusion that sane thought and vigorous intellectual activity is possible only through the medium of brain cells that are well nourished and physiologically active. It appears therefore entirely reasonable and logical to conclude that all educational methods which ignore the physiologic evolution of the child are faulty and open to criticism from the physiologic and hygienic standpoint. As a matter of fact, we not only ignore the most obvious requirement of practical hygiene in our school curriculum, but we insist upon a uniformity of educational training which is physiologically as absurd as it is impossible of practical application." "Forty-four per cent. of the physically defective are mentally dull. These children imperatively demand special school training." Attention is called to this "to emphasize the practical value of regular, periodic, physiologic examination of school children. It was early shown by Dr. Sequin and others that a partial restoration the dormant nerve cells of the brain could be effected by the application of judicious training along the lines of primitive development." Dr. Norr

has twice shown by taking a boy out of school and placing him under a private tutor for a period of three months each, that fully as much work was accomplished in two hours per day as in six hours at school. Dr. J. H. Carstens (8) of Detroit, in the Chairman's address before the recent session of the A. M. A. at Saratoga, said: "Take our school system. The children are stirred up to ambition, are urged to set their mark high, and all to become teachers, lawyers, ministers and physicians. They work after school hours, yes, work to twelve and one o'clock at night. They get up early in the morning to review their lessons before school hours, and the result is inevitable. If such a person be a female it is all the worse. The tremendous demands on the organism during the stage of rapid development, from childhood to womanhood, requires that the strain on the brain by excessive study should certainly be lessened, especially so during the menstrual periods. There seems to be no provisions made in our schools for this." Dr. M. H. Hatfield of Chicago, says: "Our children are human dynamos with certain potential voltage for each one, which voltage cannot be increased by multiplying the switches or attaching more incandescent lamps. Every additional study is an attempt to attach another lamp on the child's intellectual circuit. Small wonder that a girl's dynamo which always runs at higher rate of speed than her brother's begins to sputter somewhere along the line." He quotes Prof. Coe as saying: "It is folly and worse than folly to assume maturity where maturity does not and cannot yet exist." "The result is overtaxation, worry, despondency, morbid conscience, bad temper, and heightened liability to sexual temptation." Omitting the last clause, we would substitute neurasthenia, Chorea, Hysteria and in some cases insanity. These troubles exist where no provision is made for rest for young women during the menstrual period, and where rivalry is very great. The writer remembers a case in point: A young lady class mate who was doing advanced work in chemistry; for four months she led the class, then the string snapped and she was sent home a chronic invalid from which condition she has never recovered. Dr. H. P. Newman (6), says: "This period (the period between childhood and womanhood), in which nature is concentrating all her energies upon the generative organs, and the establishment of their physiological functions is ordinarily that in which greatest demand is made upon the vital forces of the girl by the exigencies of our modern social and educational systems. Her mental and nervous forces are taxed to the utmost by the ambition of the study room and the transitions from grammar to high and normal schools; she is overwhelmed by the addition of music and one or two languages to the already full curriculum. In a very large per cent. of American girls

there is greater or less impairment of the menstrual function. Engelman's statistics covering all degrees of pain give as high as 73 per cent. of suffering at the monthly period and 50 per cent. of irregularities of all kinds." He concludes: "If mothers and educators could be made to realize how preventable are most of the diseases from which the rising generation of woman is doomed to suffer; if for instance they would reflect upon the fact that among the most prolific causes of gynecic disease are maldevelopment from imperfect hygiene at puberty, taking cold at the menstrual period and constipation, the season of girlhood would henceforth be brought much nearer nature's wise intention and would to a great extent cease to have its present significance to medical science." Dr. Arnold (5), of Boston, in the discussion of Dr. Ott's paper at Columbus, Ohio, says: "In November, 1894, we started a system of school inspection by physicians. The city was divided into fifty districts and one examiner was appointed for each district. A visit was made to the schools each day. During the first year 16,790 pupils were examined. 10,737 were found to be sick, 2,041 were sick enough to be sent home and 453 were found suffering with contagious diseases." Dr. E. G. Brackett (2) said: "Hertzel's investigation of 4,352 school children found in 3,141 boys 31 per cent. and in 1,211 girls 39 per cent., who had chronic disorders. By commissioners appointed in Sweden and Denmark it was found by one that of 17,595 boys 29 per cent. and of 11,646 girls 41 per cent., had chronic disorders. By the other, it was found that of 11,210 boys 44 per cent. and of 3,000 girls 61 per cent. came under the same class. It is note worthy this same report goes on to say that one-half of the girls were chronically ill in their thirteenth year. Upon entering school 20 per cent. were chronically ill, but the cause of illness rises rapidly after entering until the eighth year, when 25 per cent. were ill. The practical standard of school work is five hours a day and five days a week. The laws of Massachusetts have restricted the working hours of minors to about 8 1-2 hours per day as it deems that amount of physical work all that the developing child should be allowed to do. Yet we know that the recovery from mental fatigue is much slower than from physical.

Investigations also have shown that chronic disorders are especially frequent among children whose instructions extend over the whole day, and that the per cent. of disease is greater among those who go to school all day, than those who go in the morning only. It is a known fact that during the period of accelerated growth there is a noticeable diminution in the power to resist fatigue. The most important of these periods of growth, when the foundation of the health of woman is being laid, occurs at a time when excessive demands are

often made upon her mental powers. Dr. W. R. Lovett (2), said: "It was found that there was an increase of 33 per cent. in the mistakes made by children in dictation tests given early in the morning and after four to five hours of recitation and study. The fact that the mental processes are impaired by continuous application in the third quarter of an hour of continued work is too important to be set aside easily. It is significant that Iguatieff found that 191 out of 242 children lost on the average of 3 1-2 during the examination period."

Investigating the number of girls who left school on account of health, Dr. Lovett found that ninety-four out of 1,938 left for that reason. In one school 4 per cent. left. The fact that in this selected class one girl in twenty leaves school on account of ill health is not to be overlooked. In one school of 200, 30 per cent. are reported as having habitual headaches, 15 per cent. as suffering from constipation and indigestion. He says: "I have not dwelt on the evil effects of examinations. The teachers are awake to it and many are minimizing these bad effects. One teacher gives no marks on examination except passed or failed; the anxiety to obtain higher marks than one's neighbor has gone and the girls have improved. At another school examinations are so arranged that no girl need take all her examinations during her menstruation." Dr. E. M. Massey (2), said: "The death rate of children out of school is slightly less than that of children in school." The rate is given in Boston as 6.1 per cent. in public schools, 2.5 per cent. in private schools and 4.9 per cent. in children not in school. Dr. Jane Kelley Sabine said: "Observation of 2,000 students in finishing schools and colleges gave the following tabulated results: 30 per cent. were either wearing glasses or given orders to have their eyes examined by a specialist; 6 per cent. showed defective hearing; 4 per cent. had flat foot; 5 per cent. had weak lungs; 4 per cent. had heart trouble; 2 per cent. had kidney disease. Menstrual difficulties were the most marked; 75 per cent. were found with irregularities dating from puberty; 60 per cent. had to give up from one-half to two days and 90 per cent. had leucorrhoea."

In the discussion: Dr. Worcester (2), said he had found children in the schools in the last stages of Phthisis. "I wish," he said, "I could formulate in words my feelings that there is frightful cruelty in the public schools in the competitive examinations. It is absolutely impossible or the woman to do herself any kind of credit at an examination held upon the first day of her menstruation. And before that function is fairly established, when it is attended by all sorts of trouble, it seems to me atrocious to think of little girls being forced to go through any competitive test at such a time. Dr. Reynolds (2),

said, as a gynecologist, that "it seemed to him college bred women came to him in greater numbers than seemed to be due to the number of college bred women in the community. They almost always come suffering from an underdeveloped uterus, and obstructive dysmenorrhoea and a restless, unsettled nervous system." Dr. Francis Storrs, of Kansas, (1), gave us some good advice in 1894. He said: If it takes three years of constant study and clinical observation to fit a man to wait upon a woman in confinement and to faithfully discharge the few small duties nature has left undone at this time, how much longer ought it to take to fit that woman for her part in the preceding nine months, and for the responsibility which becomes hers at that time? What all women need as a preparation for their higher functions in life is a thorough training in anatomy and physiology. That training should begin at an early age in preparation for the advent of menstruation, the physiological import of which process should be made as clear as our best authorities can make it.

From 14 to 18 or 20, the aim of the young woman's training and education, in school and out, should be towards physical perfection. Systematic exercise in the gymnasium and out of doors should be a daily certainty, and the full process of gestation and parturition with the development of the embryo and the growth and needs of the child should be unfolded in continuous instruction. When women turn their attention to acquiring physical fitness for motherhood there will be less demand for the professional gynecologist. He makes the point that women after leaving college themselves feel that some very essential subjects have been omitted from the curriculum. He quotes Garrigue as saying: "Our girls are overeducated, especially in music, not overeducated, but educated in books too soon. Physical education must come first and there will be plenty of time afterwards for culture and art."

Beginning in 1899, Dr. W. S. Christopher (12, 13, 14), began a system of measurement of the public school children of Chicago. As a result of that work a department of Child Study and Pedagogic Investigation has been established, probably the first instance on record, according to Dr. Christopher, of a municipal board appropriating money for research work. As a result of the examination 2,537 boys and 3,099 girls, a close relationship was shown between the curves of physical endurance and lung capacity. It was further shown that at all ages girls exhibit less endurance than boys. He says the close correspondence between the curves of height, weight, strength of grip, and vital (lungs) capacity is very striking. He deducts from his analysis of 6,359 school children that "Unbalanced physical development is an important factor in the production of morbid manifes-

tations. It is operative throughout the developmental period of life. It occurs with the greatest frequency at puberty and there finds its most marked expressions." His investigation confirms the statement of Dr. W. Townsend Porter, of St. Louis, who reported as the result of his examination of 33,500 school children that "There is a physical basis of precocity, that dull children are lighter and precocious children heavier than the average child, that mediocrity of mind is associated with mediocrity of physique."

These experiments of Dr. Christopher and the Board of Education of Chicago are most painstaking and thorough. I wish I had time to enter more into the detail of their work.

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(Continued in next issue.)

INFLAMMATORY CONDITIONS OF THE VERMIFORM APPENDIX, WITH REPORT OF CASES.*

By W. T. HENDERSON, M.D.,

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While the subject of this paper covers a wide range of study, it is my purpose to cite only a few of the different types of the disease illustrated by as many cases.

From a clinical standpoint there is only one kind of appendicitis, as the several different conditions of the appendix found at operation may have been at first a simple attack of appendicular colic; later, catarrhal appendicitis, acute or chronic, and still later, perforation, suppuration or even gangrene may have taken place in the diseased organ. We should not overlook the possibility of the specific infections, and in my report of cases I will cite one case of tuberculous appendicitis which occurred in my practice. We may also have cases occurring in the course of acute infectious diseases, and I will report one case where the early symptoms of the disease were masked by an attack of la grippe.

There are several reasons why the vermiform process is particularly liable to disease. It is a relic of what was probably a large cecal pouch and the size of the lumen of the organ bears a direct ratio to the liability to disease, especially if the natural constriction of the proximal end known as the valve of Gerlach be unusually small.

Were the lumen larger, any slight catarrhal inflammation of the mucosa of the intestinal canal would not cause sufficient constriction of the appendix to produce obstruction.

With slight obstruction of the appendix comes appendicular colic. With continued apposition of the mucous walls of the organ while in the stage of congestion, comes ulceration, and following the ulceration is organic constriction, if healing takes place.

Then we have constriction at the point of exit of the appendix, the cavity filled with petrefactive and pyogenic bacteria as well as the *b. coli communis*, it is easy to understand how distension takes place. With distention we have pressure upon the blood vessels and so follows gangrene. Formerly, much stress was laid upon vascular disturbances as an important factor in the causation of appendicitis. While it is conceivable that thrombosis or embolism of the vessels might occur, and thus produce a necrosis of the structure, this form of primary arterial obstruction must be very rare. Breuer has shown that the artery of the appendix is not an end-artery, but that there are fairly effective anastomoses in all the coats of the organs.

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Endarteritis and peri-arteritis, considered by some to be the cause of necrosis, are not always present, and may when present, be due to previous inflammatory conditions.

Kinks and curvatures of the appendix have much to do with lowering the vitality of the tissue and rendering it a prey to the invasion of the ever present microbes.

This kind of succession of attacks lead to gangrenous appendicitis, and it is my purpose to report a case of this form of the disease.

Barring the specific infections, the kind of appendicitis depends upon the time of operation, and the effects upon the patient depends upon the capacity of the peritoneum to wall off the diseased portion, the virulence of the micro-organisms and the resistance of the tissues of the body to the absorption of their ptomaines

If you are interested in discovering the kind of appendicitis which your patient may be suffering from, I would advise you to open his abdomen and see. This is the only way to treat the disease scientifically, and while you have the organ exposed to view, incidentally you may remove it.

Case 1. F. G. White, carpenter, age 34, was first taken with abdominal pain in 1885, an abscess pointed in the right lumbar region; was opened by a competent surgeon who called it a "cold abscess." During the following six years he had several attacks and occasionally the sinus just above the crest of the ilium posteriorly would open. In 1891 he had osteomyelitis of the femur and an abscess pointed on the inner side of the thigh, three inches above the knee; he had repeated attacks of pain in the leg with discharge of pus for seven years. In February, 1898, his leg was opened; the diseased bone tissue removed and the cavity filled with bone chips. The parts healed by first intention, subsequently he had other slight attacks of pain in leg with discharge of pus. This, however, gradually healed with the administration of creosote. Occasionally he would have pain in region of the appendix and also in his right thigh which would rapidly disappear with the administration of creosote.

Fourteen months ago he suffered an attack of appendicitis with formation of abscess. The appendix was removed, the pus cavity drained and packed with iodoform gauze; he had an uneventful recovery with the exception of a fecal fistula which healed and the condition of the appendix lead me to pronounce it one of tuberculous infection.

Case 2. O. L. C., age 58 years, was first taken on Nov. 30, 1901, with a slight chill in the night. For one week he had every symptom of la grippe, cough, coryza, neuralgic pains in the head, neck and brachial regions, slight pain in the abdomen with no localization; pulse

120, temperature at no time over 101. On the eighth day of attack, pulse 100, temperature 99 1-2. We discovered the tumor in the right iliac region with tenderness. Operation was immediately advised, and on the twelfth day following the initial chill his abdomen was opened and a large abscess evacuated; appendix had sloughed off.

The cavity was irrigated, a drainage tube was inserted. He made a good recovery.

Case 3. S. S. P., age 39, has had several attacks of appendicitis initiated by intestinal catarrh accompanied by catarrhal jaundice contracted while with the soldiers at Miami, Fla.

On Aug. 12th last he suffered a severe attack of pain in abdomen and came to my office with his hand held tightly over his appendix. He was sent home and ice applied, seidlitz powders given to produce a thorough evacuation of bowels. That evening his pulse was only 90 and his temperature 99, and I was of the opinion that this attack would pass off as others had previously under the same line of treatment. During the night he had a severe chill and at the morning visit found his temperature to be 103 1-2, pulse 120. He was immediately removed to the Providence Infirmary, an operation performed 12 hours after the beginning of attack. The appendix was found to be gangrenous and to contain pus; a drainage tube was inserted and the wound closed. He made a good recovery.

Drainage should be used wherever there is the least doubt of specific material being loose in the abdominal cavity. It is nice surgery to remove the diseased tissue and close the abdomen, but it does not always save the life of the patient, the primary object of the operation, and I do not consider an operation for appendicitis successful which does not save the life of the patient. No one doubts the truth of this assertion—a live man with a possibility of a hernia is better than the probability of a dead one without a hernia.

The surgeon should operate on all cases of appendicitis whenever and wherever seen, since an aseptic operation does not injure the patient. The brave surgeon should not stand back on account of public sentiment, or the fear of personal loss.

When the general practitioner reports 80 per cent. of recoveries of his cases treated on the expectant plan, it does not mean that he cures 80 per cent. of individuals. Very few individuals who have suffered severe attacks of appendicitis ever fully recover without operation, and in my opinion he who treats a patient on the expectant plan cannot expect good results. Give a patient time, expectancy and morphina and a large per cent. of your cases will die.

A CASE OF CO-EXISTING INTRA AND EXTRA UTERINE
PREGNANCY, ONE FETUS EXPELLED AT THIRD MONTH,
THE OTHER REMOVED BY OPERATION THREE
MONTHS LATER.*

By HARRY T. INGE, M.D.,

MOBILE, ALA.

Although a few instances of double pregnancy have been reported, in which only one fetus was contained in the uterus, the other being extra uterine, the condition must always prove interesting to the careful diagnostician and to the surgeon, and I feel, therefore, that no apology is required for asking your brief attention to the following case recently seen and operated upon by myself.

The patient was a very intelligent lady of good family, previously in sound health, no inherited weakness, married eleven years, the mother of one child, now seven years old and healthy; she had suffered some, but not excessively, from irregular and painful menstruation, was last unwell in July, but for two months thereafter, paid little attention to the absence of catamenial flow since she had previously missed her periods not infrequently. By September she began to suspect that she was pregnant, developing the usual symptoms of this condition, together with pain in the left side. This pain steadily increased, as the pregnancy advanced, until it culminated in violent abdominal cramps, and distressing pain, which, after three days, terminated in abortion. The fetus was well formed and in healthy condition, and was estimated by Dr. W. F. Betts, who attended the lady, to be about three months advanced. The husband of the lady, an unusually intelligent gentleman, also saw the fetus and described it to me, as being well developed in all respects.

Notwithstanding the expulsion of the fetus the abdominal pain continued with gradually increasing intensity, and the abdomen remained enlarged.

Dr. Andrew Jay, of Evergreen, and other physicians were called in, and after consultation a curettage was done by Dr. Betts, some pieces of placenta and decidual membrane being removed.

Relief, however, was still denied, and hypodermic injections of morphia were resorted to, to make life endurable, the amount reaching from 1 to 1 1-2 grains daily. In December, Dr. Green, of Chicago, who was visiting in Evergreen, was called in consultation, and made a prolonged examination under anesthesia. His opinion was that the

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lady was pregnant, but he regarded the fetus as being in the uterus; he failed to locate the os-uteri, and concluded that there was complete retroversion, and that surgical intervention would be needed to effect delivery.

The lady, suffering intensely, exhausted from pain, and almost in extremis, was then brought to Mobile by her husband and Dr. Andrew Jay, taken to the Inge-Bondurant Sanatorium, and the case placed in my hands. This was on January 20, three and a half months after the miscarriage.

Upon examination I found the abdomen enlarged to the size usual in a six month's pregnancy. On palpation a large firm tumor could be made out, a slight but perceptible sulcus extending across it from right to left. The tumor was immovable. Vaginal examination disclosed a hard tumor-like mass, the nature of which could not be exactly determined. The os-uteri could not be felt. Digital examination through the rectum showed the same tumor-like mass, but, in addition, the head of a well developed fetus could be distinctly made out, only the rectal wall and a thin membranous sac intervening. I at once diagnosed the case as one of ectopic pregnancy, notwithstanding the miscarriage of three months previous, and advised an immediate operation, this being readily agreed to by the patient and her husband, and its necessity fully concurred in by Dr. Jay. The lady was, however, so weak and reduced by long suffering, and the use of morphine, that I explained to the husband the danger, that the wife might not survive the operation.

The patient was prepared and the next day, January 21, 1902; was placed on the table. Although the vaginal operation offers some advantage in these cases, I decided that, since the patient was not in the condition to stand loss of blood, shock, nor prolonged anesthesia, the abdominal route was in this case much to be preferred. Ether was administered, and well borne, an incision of the usual length, and in the median line was made, bringing into view a greatly enlarged uterus, so immovably adherent to surrounding structures that it could not be lifted through the opening. The incision was then enlarged to the ensiform cartilage. A fluctuating tumor could then be made out behind the uterus, this being quickly recognizable as the sac containing the misplaced fetus. Up to this point the patient had lost no blood, but knowing that so soon as the sac was broken, the hemorrhage would be great, I applied a pair of long clamps to each broad ligament, securing the uterine and ovarian arteries in the same clamp. The thin walled sac was then ruptured, and a living, healthy, perfectly developed infant of apparently six and a half months' growth, tak-

en out. This infant breathed and moved fully for some minutes, and then died. The placenta was gotten out and still no hemorrhage, thanks to my clamps, which latter I dared not remove until the arteries were secured. The space to work in was small, but I succeeded in passing silk ligatures as far down as the broad ligaments, and cut down behind the clamps and ligatures. This, to some extent, relieved the immobility of the uterus which I was then enabled to lift up a few inches permitting the passage of other ligatures as far down as the internal os-uteri. The bladder was pulled up and dissected from the anterior wall of the uterus after the broad ligaments were completely severed, and both sets of uterine and ovarian arteries securely tied with silk. I was thus able to draw the uterus up and out of the pelvis, and then discovered that the posterior wall of the uterus formed the anterior wall of the fetal sac.

The uterus was now entirely removed, and immediately thereafter although with much difficulty, owing to the numerous and firm adhesions, the sac itself was removed. The anterior wall of the rectum was for a distance of three inches firmly adherent to the sac, so that in clearing away the latter, the wall of the rectum was denuded of peritoneum for several inches. The muscular coat being, however, in good condition, it was hoped that nature would successfully repair the injury. During the removal of the sac, pus was discovered coming from the left fallopian tube, so it was decided to remove both tubes and ovaries, which was done. The abdomen was well flushed out with a hot saline solution and closed with through and through silk-worm gut sutures, down to the last two inches of the incision, which was left open for drainage. Being mindful that I might have trouble with the denuded rectum, I carried the gauze drain to that point.

During the operation the pulse ran up to 145, the respiration became rapid and shallow, necessitating saline transfusions, these being given by the rectum, median basilic vein of left arm and into the right breast all at the same time.

The operation consumed 55 minutes. The patient rallied after the transfusions, and was placed in bed with hot water bags around her. The details of treatment during the next three days are as follows:

At 12:30 p. m. close of operation, hypodermic of strychnine 1-30 gr. Digitalis 10 m. atropine gr. 1-150, whiskey. At 2 p. m., pulse 140, respiration 35, hypodermic morphine 1-8 gr. Digitalis 15 m. ergot. 4 p. m. pulse 130, respiration 29, temperature 98 1-5. 5 p. m. pulse 120, respiration 26, temperature 98. 5:30 p. m. catheterized, urine very bloody, heavy sediment. 5:45 p. m., sleeping, pulse 112, respiration 24. 6:30 p. m., hypodermic strychnine gr. 1-60. 8 p. m., tem-

perature 98.4, respiration 24, pulse 90. At 10 p. m. catheter used, first urine drawn bloody, last normal in color. 12 p. m., temperature 98.4, pulse 90, respiration 24, sleeping at intervals. At 5 a. m., temperature 98.4, pulse 90, respiration 21, morphia gr. 1-8, strychnine gr. 1-60, hot water in drachm doses given every half hour; sleeping at intervals.

Jan. 22d, 10 a. m., temperature 98.4, pulse 84, respiration 21, crushed ice given at short intervals, beginning at 3:30 p. m. Calomel 1-8 gr. every hour until one grain was taken. At 3 a. m., Jan. 23d, the bowels moved, a thin watery action. Her condition remained normal until Jan. 24th, I removed the gauze drainage. As everything looked clean the abdominal wound was closed. The patient continued to improve until 27th, when on dressing the abdomen, I detected a foul odor. On examination I found it was due to an escape of fecal matter through the opening left for drainage. I reopened the abdomen at once, washed out the cavity, and saw at a glance that there was a clean canal from the external abdominal opening down to where the rectum had been denuded of peritoneum, and that here the rectal wall had sloughed, and a perforation into the vagina occurred. Each day, through the abdominal opening, through the rectum and vagina from which fecal matter also oozed, thorough irrigations were used. The abdominal opening gradually closed up, she soon passed fecal matter through the rectum daily, with only a slight leakage through the abdominal opening.

There was a slight elevation of temperature, 99 to 99.5 for several days prior to the rectal perforation, reaching 101 on the day it occurred. For two weeks thereafter the temperature ranged from 99 to 100, gradually subsiding to normal as the general condition of the patient improved. The lady gained rapidly in strength, she took first liquid, then solid food without discomfort or gastric disturbance, and in a short time developed a normal appetite. The bowels moved daily, actions not abnormal, save for the annoyance of the fistulus openings. The gain in weight was rapid. On March 10th, about seven weeks after the operation, the patient returned home. At that time there was some discharge of faeces through the vagina at each stool, and an occasional slight escape of fecal matter via the external opening.

Recent reports from the husband, state that the external opening has now practically closed entirely, but the escape of fecal matter through the vagina continues. Whatever fistulous opening persists can of course be readily closed by operation several months hence.

ATRESIA OF THE VAGINA.

By W. H. Blake, M.D.,

SHEFFIELD, ALABAMA.

Atresia of the vagina implies a complete occlusion of the vaginal canal. The question as to whether every so-called congenital atresia existed prior to birth or has been acquired by some inflammatory process during childhood, is one yet unsettled. The prevailing opinion seems to be that every atresia in a simple genital organ is caused by an inflammatory process. On the other hand, there is no explanatory reason for excluding entirely congenital malformations during the embryologic development of the fetus. Atresia of the vagina excludes menstruation and may give rise to the accumulation of blood (haematocolpus) or pus, (pyocolpus) in the vagina above the septum, or in the uterus. The following case illustrates this condition:

On the night of June 10, 1901, I was called to see M. P., a girl thirteen years of age, who was suffering with intense paroxysmal pains in the lower portion of the abdomen. I was informed that about a month previous to my call, the girl complained in a similar manner, but the pains were less severe. While only thirteen years of age, her appearance was that ordinarily observed at puberty. The mammae were well developed, there was a growth of hair over the pubis, and she weighed one hundred and fifteen pounds. There was a tenderness over the abdomen, except low down in the pelvis. The outlines of a tumor could be distinctly felt just above the pubis. The girl never menstruated. A hypodermic of morphine was given and the parents instructed that I would call again the next day. The next visit, Dr. H. W. Blair saw the patient with me. The symptoms observed the night before were unchanged. The pains were paroxysmal and simulated labor pains. In order to make a more thorough examination the patient was anesthetized. In an effort to insert the finger into the vagina it was found that the canal was only about half an inch in depth and ended in a cul-de-sac. No evidence of a tumor could be detected by the sense of touch. An ocular inspection of this cul-de-sac, revealed in its right anterior portion a depression that would admit the end of a small probe to the depth of one-eighth of an inch. On passing the finger into the rectum about two inches from the anus it came in contact with a round, elastic tumor, located in front of the rectum. With one finger in the rectum and the other in the shallow vaginal pouch, it was discovered that about one and one-fourth inches of tissue intervened between the lowest portion of the tumor and the

*Read before the Medical Association of the State of Alabama April, 1902.

vaginal pouch. Our diagnosis was atresia of the vagina with retained menstrual fluid. The tumor was aspirated through the rectum and about six ounces of dark, thick fluid removed. This relieved the patient of pain. She had suffered several days before my first visit. She was nervous and irritable. It was decided to wait a few days before proceeding to operate for the atresia. On the third day after the aspiration fever arose and pain returned in the pelvic region. Examination revealed a similar tumor. We again aspirated through the rectum and found that the fluid filling the tumor was an offensive, bloody pus. The tissues had evidently become infected from the aspiration three days before. We decided to operate for the vaginal atresia at once. In addition to giving a chance of relieving the atresia itself, it offered the best course to pursue to drain the infected cavity.

For the operation the patient was placed in the lithotomy position. A sound was placed in the bladder and held as a guide is held in the perineal operation for stone in the bladder. Retractors held back the labia and the sides of the vaginal pouch. With an index finger in the rectum, beginning at the upper end of the vaginal pouch I dissected the tissues upward and backward in the direction of the axis of the normal vagina. The incision was made transversely and the cutting was done with curved scissors. The sound in the bladder could be plainly felt by the finger in the rectum. The point of the curved scissors was turned downward to avoid cutting into the bladder. The thickness of the tissues between the finger in the rectum and the cutting point of the scissors could be felt as the dissection proceeded and enabled me to avoid cutting into the rectum. The first half inch of the dissection was made through cicatricial tissue. I then discovered it was cellular tissues through which the incision was being made. The scissors were withdrawn and the index finger of the right hand inserted into the wound, and by tearing the cellular tissues the opening was continued in the same direction. After proceeding about an inch the walls of the tumor felt in the rectum could be felt by the finger in the vagina. An opening was made into the sac, and this enlarged by placing the beak of a pair of forceps into the opening and separating the blades. The tumor was found to be on the upper portion of the vagina. The os-uteri was felt to the right side of its normal position. The cavity and the wound were washed out with carbonized water and packed with iodoform gauze. This dressing was changed daily. After ten days a Sims' vaginal plug was inserted. This was removed and the vagina irrigated with carbolic water once a day. It required two months for the canal to heal. During this time the

patient lost flesh and developed chorea. The chorea persisted for three months. It was three months before the patient menstruated. Her health then rapidly improved and since then she has menstruated regularly. She is now in good health. She still uses the Sims' plug about once or twice a month. This she says gives her no pain.

INSOMNIA.

There is nothing which more effectively saps the patient's strength than the inability to sleep. If in the course of fevers, or any other acute or chronic disease, and we allow our patient to go without adequate sleep, we shall find that the patient will become progressively weaker. In nervous diseases this symptom is to be especially dreaded. The question will naturally be asked by the reader, "What have you to offer in the way of treatment that is new or good?" Replying to this question we shall say that our treatment has been well tried, and that it affords the most rational course open to the profession. We do not write to laud some new hypnotic, but to lay a simple and effectual treatment before the profession. In the first place, all patients who suffer with insomnia must have baths with regularity. We advise our patient to have a bath of twenty or thirty minutes duration every night just before going to bed. When, however, insomnia is associated with typhoid fever, or any other acute disease, I have the patient bathed every six hours. These patients should be bathed in tepid water. Along with systematic bathing must go the regular administration of a nerve tonic—an agent which exercises a toning and equalizing effect upon the brain. In fulfilling this important demand we have secured the best results from Daniels' Conc. Tinct. *Passiflora Lucarua*. Its action is prompt, and it does not tend to produce the drug habit. Nearly all of the so-called hypnotic remedies will produce drug addictions. Especially is this true of those hypnotic remedies which contain opium or chloral.

Daniels' Conc. Tinct. *Passiflora Lucarua* is a concentrated tincture of Passion Flower, and while it is most valuable as a tonic to the nervous system, and in this way induces natural sleep, it never creates drug addiction. In no case have we ever seen the least nervousness following upon the leaving off of this agent. We give this remedy in doses of a teaspoonful every three hours. But where there is a great deal of restlessness the remedy can be given in larger doses, or with greater frequency. The physician has considerable latitude along this line of dosage, as the remedy is not in any sense poisonous.

Donald Syar, M. D.
New Zion, Ala

Selected Articles.

THE PROBLEMS THAT INTEREST MOTHERHOOD.*

By Mrs. W. H. Felton,

CARTERSVILLE, GA.

My appearance before this audience today stands for no intimate acquaintance with the science of medicine, or knowledge of the questions which you discuss so ably. I am only a learner—and my eager interest in these matters no doubt influenced your President to extend to me an invitation to appear and explain my reasons for this interest. Three years ago I made an address on this subject before the Woman's Club of Atlanta, and in 1897 sent a paper to be read before the Mother's Congress in Washington City. My greatest regret is my inability to awake a lively interest in the minds of the mothers of the country on this and kindred subjects; because I feel sure if the subject could be presented in force and pertinence there would be an awakening that would show itself in every home in this broad land of ours.

I agree with your President that all human life is influenced by heredity, by training and environment in the order here named. Heridity comes first. Mothers should have some conception of the part they play in life's drama, when every child must have a mother and when every child's life is unavoidably shaped by the mother's nature, her health, her tempers and idiosyncrasies. She herself is the repository of the ills and benefits resulting from close relation to her ancestry—those who handed them down to her. There are legacies handed down—bequeathed—that would shock and startle many of us if we could trace the end back to the beginning.

But our young women, about to step into matrimony, know less of themselves and what is involved in parental relations, than any other subject heretofore considered by them. Their previous education is all away from the subjects rather than toward them. Children are being born into this world every day, every hour, aye, every minute, and I feel sure that nine tenths of the mothers know less about the influences that will make or mar the physical, mental and moral destiny of those they bring into the world than any other subject that interests them. This ignorance is alarming. When stock-raisers, fruit-growers, seedsmen and everybody interested in such business matters are so scrupulously exact in securing proper reproduction, the destinies of their own children and grandchildren are put aside in the most indifferent way; and

*Read before the Georgia Sociological Society, Atlanta, June 1902.

alliances are contracted in the most haphazard style. Truly, marriage is a lottery.

People move into new neighborhoods; settle in hard localities; invest their money and spend their time in getting money, when their children and grandchildren have scarcely a thought as to proper associates and those they will mate with, because they will mate at mating time; and the mates will be found generally where they chance to be associated. This is the rule—almost without exception.

If a piece of real estate is purchased, a lawyer is hired to trace the title, and the utmost care is taken to be sure, before the money is paid over; but when the daughter falls in love with an unknown lover, and maybe marries a whited sepulcher, with a fair outside, but full of inherited rottenness and dead men's evils, what comfort or happiness or peace of mind will attend the money, after such a disaster?

Why is it that the world does not recognize the fact, that motherhood and all the problems of human life are indissolubly connected and cannot be divorced, since every human being must have its mother?

With the snows of sixty winters drifting down on my head and my steps going down the sunset slope of life, I come to you, to add my word of approval to your undertaking, and to beg you to so broaden the scope of your organization that intelligent womanhood may be instructed, entreated and warned on the subjects in which their interest is so great, with influences so potential.

For two decades I have lifted my small voice in Georgia towns and cities to plead against the crime of forcing little children, without their own consent, into drunken homes and entailing on their little lives the curse that travels along with inebriety and debauchery. I have been called "a fanatic, a crank, strong-minded, out of my sphere," and many names of that sort, because I cried aloud for home protection to the mothers of such children; but standing as I do in the sight of God and in the presence of this distinguished company, I affirm, as my honest conviction, that no greater service can be done for the human family—without regard to sex—than the protection of unborn children from the evils— inherited evils—that go with drunkenness; and this protection must come through the united efforts of the mothers and fathers of these children.

How many families can you call to mind, who, after twenty-five years of marital union, can present a clean bill of health—moral, mental and physical? Without deformity, insanity, drunkenness, im-

mortality and crime? Tons of writing paper have been devoted to the proper training of children; and pulpits have thundered for a full century on the curses that follow to the third and fourth generation; but how little has been said or written or preached about the proper training of fathers and the needful instruction of mothers in the greatest calling ever followed or pursued under the shining dome of Heaven!

Mothers hold the race-endowing function in themselves. The Lord Almighty decreed it. This function is at once the greatest mystery and the grandest work ever confided to human kind; but nine tenths of the women—may I not say ninety hundredths—know no more of the dangers that attend the destinies of the unborn child, or of their own intimate relation to reproduction of their own kind, than the birds in the air or fishes in the sea. I blame mothers for much of this ignorance—but much of it also belongs to the apathy and indifference of the public. No stream rises higher than its source. The mother can only give her child what she herself possesses. Oh! that we might reckon in the list of virtues the uncommon attribute of common sense on these subjects.

Mothers have been trained, unfortunately, to a system of false modesty and unwholesome avoidance of this and kindred subjects. Why should they not instruct their daughters, aye, their sons, as the king's chamberlain tutored Esther before she was wedded to Ahasuerus? Oh! it is painful to know that a young girl is pushed out of the home nest to flutter in dismay and too often to perish on the ground at last! How is she to know without a teacher, and what teacher so proper, so tender, so sympathetic and so loyal as her own parents?

There were thirteen thousand divorce cases in New York city alone in the year 1897. That tells a tale of failure, defeat, disappointment, mismating, that needs no comment; and it is so all over the land.

When the census of 1890 was taken there were 700,000 defectives in the United States—blind, deaf, deformed, insane, imbecile, epileptic, etc. That is another story that needs no explanation in this presence.

I believe as firmly as my mind can grasp the condition, that the negro's education in books has been largely unproductive of good results, because it antedated the proper training of the mothers in their lewd homes.

This land is burdened with convicts and ex-convicts, the latter without character or credit, after they are turned loose on the com-

munity. These lewd homes are continual crime-promoters. They pull down faster than book education can build up. If I could only whisper a word in Mr. Carnegie's willing ear, I'd say, spend some of your money on reformatories for ignorant women and girls, who should never be permitted to marry or propagate their kind until good character shall have been established.

This brings me to the question of indiscriminate marriage licenses. A health certificate should have been required a hundred years ago. No honorable man would be willing to enter the parental state when his own physical conditions failed to warrant reproduction under their influence and sway. Those who would disregard the restriction should be legally restrained, for public safety, in view of public expense.

Now that the State has assumed the burden of educating the child independent of its parents, it should be given discretionary powers to forbid the spawning of an interminable horde of defectives with inherited evils of mind and body. Begin at the beginning. Reform where it needs reformation. The running stream can be diverted when it is a brook. After it becomes the river, it must go its own way. Hereditary characteristics are transmitted. There is no question about it. Some weeks ago statistics were given in New York State as to the progeny of a woman who died in 1828. She had 800 known descendants. Nine tenths were criminals, as she had been a criminal; some hundreds were diseased in various ways; many were hung—some died serving life sentences; and the State spent thousands upon thousands of dollars in convicting and punishing the woman's descendants. You all read her history, I presume. If her crime had made her immune to child-bearing, then she would have been less inimical to public safety and spared some physical suffering also. She was an unfit person to fling 800 of her own dangerous class upon the public purse, and her descendants were a curse to the population upon which she and those like her were permitted to spawn them. There can be no question as to the duty of the State to protect itself from this indiscriminate spawning, and to protect itself from indiscriminate marriage licenses. Your organization has authority to make itself heard before legislative committees. Why not inaugurate the movement yourselves?

I believe the State should require due notice to be given of an intended marriage. You all understand that you cannot buy a piece of land from an administrator of an estate without publishing it for weeks in a public gazette. He must get leave to sell and

then give equal notice of proposed sale; but any chap that can beg or borrow a dollar and a half and will swear that the parties are of legal age, can go to the ordinary's office between dark and daylight, and buy a permit to marry a woman who may have 800 descendants, good, bad or indifferent within her allotted period of reproduction. Fifty years from now public opinion will stand aghast at the liberty that is now allowed to lust and liquor. When a money purchase is involved (as the sale of land goes to show) you strain at gnats, gentlemen but when the fate of unborn millions hangs in the balance you swallow camels and never make a wry face at the swallow.

Motherhood is now asking itself why these things have been so long overlooked—why the protection to its high and holy calling has been so long delayed.

Public thought must be awakened! Agitation is imperative for these reforms. Nothing can be done until the people begin to think. Perhaps you are living ahead of your time. I feel sure I have been working with a small pick and shovel for twenty years at least with small evidence of progress; but you know and I know that we are confronted with race problems and all other sorts of problems, all of which alarm the patriot and the tax-payer.

We are living in an era of mob violence which is ominous. We seem to hear the earth tremblings that may culminate in a San Domingo or a Mont Pierre disaster. May God help the helpless and innocent!

As I believe in eternal justice, truth and mercy, I do believe we must begin reforms at the starting place, and remodel our permits to marry, and permits to sell crime-promoters and stand firm like Zerubbabel in the building of our earthly Jerusalem, or we will, ere we know it, find a Mont Pelee right in our midst, with all that attends such an eruption in disaster.

To you, gentlemen, who are so closely in touch with the great problems that touch mother-life and mother-love, I bring this reminder today. Throw around this high and holy calling the protection it needs and would call for if it was awake to its danger. It is the hope of the nation. It is the anchor against mob violence. It is the home-life of America today that holds the ship to the safe points of the compass.

It is at the very foundation of race troubles. When colored homes are reformed from their profligate population, and clean living prevails rather than dissolute and shameless reproduction, we will see that it can only be done by shutting off opportunities for

infanticide and indecent prostitution among the mothers of the colored race. But all the crime does not come from the submerged world. Like the frogs and flies in Egypt, sin, evil and moral disease go up into the palaces as well as the hovels. There must be a general provision to reach crimes against motherhood—no matter where discovered.

In the year 1874 the State had many less than four hundred convicts to turn over to the lease system. We established public schools a little before that time. We have run along the succeeding years with both systems in full blast—both costing a mountain of money. In 1901 we had four thousand negro convicts and misdemeanors and about four hundred whites. Now what is the matter with us anyhow! Where will we end up at this gait we are going? If we had clear vision to the horizon we would see that one system tears down faster than the other can build up. Something is radically wrong somewhere.

I may be mistaken—I know I am liable to mistakes; but I do believe we should shut the door on the reproduction of the species that continues to fill chain-gangs, and apply some of this school money to reformatories where they do not marry and are not given in marriage until they can present a clean bill of moral health, at least.

An illegitimate child should send both parents to the rock-pile, and a seducer of innocence should have a life-term at hard work; fully as much penalty as the getting of money on false pretenses, by theft or by murder, because two lives have been sacrificed to the baser passions of the betrayer.

Oh! that the world would wake up to this needed protection to the unborn child which is forced into life without any consent of its own, and its very life made the football of the vicious and depraved progenitor!

I thank you very much for this courtesy and attention. May my words find an echo in every true man's and woman's heart that hears me today.—Atlanta Medical Journal.

SENILE DEBILITY.

R. Syr. Hypophos. Comp3 oz.
 Celerina (Rio)2 oz.
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Editorial.

JNO. C. LeGRANDE, M. D.,.....Editor and Prop.

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In Memoriam—Thomas Childress Osborn.

In a recent issue of the Cleburne (Texas) Enterprise, I find the following obituary notice:

"The death of Dr. T. C. Osborn which took place last night (August 19th) at his residence, 710 N. Robinson St., came as quite a shock to the many friends of the deceased, many of whom did not know of his dangerous illness. Dr. Osborn had been in feeble health for some time, and being of advanced age could not so easily shake off the shackles of disease as in former more robust days. Dr. Osborn was a landmark in the medical fraternity of Cleburne, and the progenitor of a family of physicians of sons and grandsons. He had long been recognized as authority in the healing art and though for

years not in the active practice of his profession, he was often consulted and his ideas and knowledge adopted. Dr. Osborn was a Mason, an Oddfellow and a member of Johnson County Medical Society, and the members of these organizations will attend and participate in his funeral services tomorrow."

The foregoing, though conveying a piece of sad intelligence to many friends in Alabama, yet it is somewhat consoling to the older members of the Alabama Medical Association to read the complimentary notice of one of their old comrades and collaborators in the early years of our Association. Dr. Osborn was one of the twenty physicians who met in Selma in 1868 and organized the Medical Association of Alabama. Only three of this number are now living—Drs. R. F. Michel and W. C. Jackson, of Montgomery, and Dr. J. Huggins of Newberne. In the early struggles of our Association for a higher standard, Dr. Osborn was an earnest collaborer and an able lieutenant to Jerome Cochran. In 1871, at the Mobile session, Dr. Osborn was elected president of the Association, which position he filled with ability. On various occasions he contributed a number of articles to the literature of the Association and the Medical Journals. The one on "Malarial Cachaemia" (afterward called Hemorrhagic Malarial Fever), published, I think in 1868-9, was a pioneer paper, the first, perhaps, written on that disease, unless we except an article on "Yellow Paludal Fever" by Dr. Faget, of New Orleans, written in French and published prior to the Confederate war. At a very recent date Dr. Osborn wrote a strong paper on Corrosive Sublimate as a cure and preventive of Small-pox. The doctor claims priority in the use of this remedy in said disease.

Dr. Osborn was born in Tennessee in the year 1818, and moved to Greensboro, Ala., when quite a young physician. Here he lived, married and practiced his profession for thirty or more years when he moved to Cleburne, Texas. The Doctor was a man of striking personality, gentle and dignified in his manners, fluent in conversation and a graceful writer. In his professional associations he was courteous and strictly ethical in his conduct. He was very considerate and kind to young physicians and no one of this class ever came in contact with him professionally who did not hold him in grateful remembrance for generous treatment.

At four score and four years, after a useful life as a citizen, and after an active life as a physician of over half a century, this father in our Medical Israel, has crossed over the Lethean Stream to rest from his toils.

"He has fought the good fight, he has finished his course, he has kept the faith, henceforth he shall wear a crown of righteousness."

Miscellaneous Notes.

NEW ORLEANS POLYCLINIC

Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information, address New Orleans Polyclinic, Post-office box 797, New Orleans, La.

Dr. W. E. B. Davis attended the American Association of Obstetricians in the city of Washington during this month.

Dr. Geo. E. Petty, of Memphis, Tenn., spent several days in Birmingham recently treating a case of morphine habit for Drs. Davis & Davis. The Doctors express themselves as being highly pleased with the results which have been obtained by the treatment by Dr. Petty.

At a recent meeting of the Jefferson County Medical Society, Dr. W. H. Sanders made a short talk for the "Cochran Monument." The Society promised to contribute \$200 to a fund for the purpose of building this monument, and Drs. J. C. LeGrande, W. E. B. Davis and D. F. Talley were appointed a committee to raise the money.

A large number of physicians have secured offices in the new Office Building on the corner of First avenue and 20th street. We hope to be able to publish in the next issue of the Journal the number of the offices and the names of the physicians in the new building, and it will be a favor to the Journal if the physicians will let us know the number of their office.

The Tri-State Medical Society of Alabama, Georgia and Tennessee will meet Oct. 7th and 8th at the City Hall on the fourth floor. The local profession is taking an active interest towards making this a pleasant and profitable occasion, and a large number of papers have been promised by the leading physicians of the three States, and from all indications the meeting will be well attended. Every physician in Birmingham is cordially invited and earnestly requested to attend and take part in this meeting. A partial program will be published in another department of the Journal.

The Maltine Company announces that two hundred and eight essays on "Preventive Medicine" have entered in competition for the two cash prizes—one thousand dollars and five hundred dollars, respectively—which that firm offered last February. These essays are now in the hands of the three judges, Dr. Daniel Lewis, of New York, Dr. Chas. A. L. Reed, of Cincinnati, and Dr. John Edwin Rhodes, of Chicago, and their decision is awaited with great interest by the medical profession at large

ERRATTA.

In last month's Journal the article by Dr. B. L. Wilkinson, of Montevallo, should have been entitled "Annual Report of the Physician for the Alabama Girls' Industrial School," and in the same article the word "manometer" should have been "dynamometer."—Editor.

Papine.—In discovering this drug Battle & Co. have conferred a lasting favor on the medical profession. We know the opium of which they make their Papine is the best. Papine has a place in my medicine case and it is emptied as often as any vial in the whole case, I nearly always have a bottle with my obstetrical cases for after pains and always feel like it will do the work. I used it lately on a case of threatened abortion with excellent results, also in a case of severe uterine colic. I find that with Papine I do not have to use my hypodermic syringe so often.

W. E. Russell, M.D.

Wyatt, Texas.

In papine advanced pharmacy has given us a perfect opium preparation. It possesses the anodyne virtues of opium and not the constipating and untoward actions. Papine may be briefly defined as the only opiate which is free from the evil effects which I have just named. It is very prompt in this respect excelling any other opiate, and it never produces nausea, constipation and the usual woes that go hand in hand with the old time opiates. Papine is, therefore, the remedy which is indicated in all forms of inflammatory pain. It is given in doses of one teaspoonful every one, two or three hours, until its anodyne action is attained. In giving papine, we can bear in mind that a teaspoonful represents the strength of one-eighth of a grain of morphine. Having this fact in mind, the dosage which is appropriate in any case will at once suggest itself.

Extract from "Remedical measures indicated in affections attended with Pain," by G. S. Trotter, M.D.

—New Albany Medical Herald.

THE QUESTION?

After many satisfactory trials of a remedy have you ever experienced a time when all the indications were the same, yet the article prescribed did not seem to give results?

You invariably presume that the old stand-by had lost its efficacy when in all probabilities you were not using the genuine product but a substitute.

In diseases of women such as Leucorrhea, Endometritis, Gonorrhea, Vaginitis, etc., where so much depends upon actual results it is imperative that the genuine Micajah's Medicated Uterine Wafers are used and not a substitute.

Only successful preparations are imitated, hence the large number of substitutes of the genuine Micajah on the market.

ITS DISTINCTIVE FEATURE.

One needs but to review the physiologic activities of the remedies recommended as tonics and reconstructives to realize the fact that practically all of them have some secondary effects which detract from their clinical value. It may be that they irritate the stomach and thereby excite repulsion on the part of the patient or even induce nausea and vomiting; some of them are astringent; others primarily stimulating but secondarily depressing—and so on through the entire category of remedies, objections more or less serious may be found. It is, therefore, a matter of great importance to employ a remedy which is not only free from deleterious by and after-effects, but which adapts itself to use as a routine remedy in the many and diverse conditions that call for tonic and reconstructive medication.

The one remedy which many years of experience proves is entirely free from detrimental effects, is Gray's Glycerine Tonic. This preparation is of pleasant taste, agrees perfectly with rebellious and sensitive stomachs, patients never tire of its continued administration, and it is extremely effective in restoring tone and vigor to the entire system.

The entire freedom of Gray's Tonic from anything like drug effects, is one of the strongest reasons why the best element of the medical profession have adopted the remedy for routine administration in all conditions associated with impairment of general health, lack of nervous energy, general exhaustion—in anaemia, malnutrition, neurasthenia, and in chronic wasting diseases.

The Purdue Frederick Co.

No. 15 Murray St., New York.

"ARE YOU IN PAIN?"

You will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve

pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant. The ideal remedy must not only do its work, but it must also do it quickly. Touching this point is an article in the Boston Medical and Surgical Reporter, by Hugo Engel, A.M., M.D. The author says: "Antikamnia has become a favorite with many members of the profession. It is very reliable in all kinds of pain, and as quickly acting as a hypodermic injection of morphia. It is used only internally. To stop pain one five-grain tablet is administered at once; ten minutes later the same dose is repeated, and if necessary, a third dose given ten minutes after the second. In 92 per cent. of all cases it immediately stops the pain." Farther on, Dr. Engel compares Antikamnia with the other coal-tar derivatives. He says that while some of these are valuable remedies for the relief of pain "not one of them is so certain in its effect in comparatively as small a dose and so prompt in giving relief as Antikamnia in every kind of pain." This uniformity in its action leads him to believe that Antikamnia possesses properties differing from the other coal-tar products, while it is certainly free from danger, if given in anything like reasonable quantities, which is not the case with other products from coal-tar. Five-Grain Antikamnia Tablets afford the most accurate and convenient form for administration.

TREATMENT OF WOUNDS.

Martin sums up the treatment of wounds as follows: 1. Cleanse the hands by washing with soap (soap manufactured by process of boiling is the only soap free from germs), and scrubbing with brush for ten minutes; then cleanse subungual spaces, scrub again for five minutes, wash or scrub in alcohol one minute, wash in permanganate and oxalic acid solution or solution of chlorin for five minutes. These solutions are not necessary for the ordinary handling of wounds, and can be substituted by the use of alcohol and bichlorid 1-1000, and afterward rinsing in sterilized water. 2. Prepare the skin by scrubbing with soap and brush five minutes or more, cleanse with alcohol and wash off with bichlorid 1 to 1000. Cleanse wound with peroxid and antiseptic solutions; dress according to character of wound. 3. Instruments are best prepared by scrubbing with soap and water and sterilizing in a 1 per cent. solution of cooking soda for at least five minutes. 4. Towels, dressings, etc., prepared by sterilizing for at least twenty or thirty minutes. Moist heat (steam) is best, as it is more penetrating. A large package of dressings will necessarily take longer than a small package. A disregard for such rules may mean not only a staphylococcal or streptococcal infection, but a syphilitic or other virus inoculation.—The Journal.

Tri-State Medical Society of Alabama, Georgia and Tennessee.

The fourteenth annual meeting of this popular organization will be held in Birmingham, Ala., Tuesday, Wednesday and Thursday, Oct. 7, 8 and 9, 1902. All are invited to attend.

Reduced rates on the certificate plan have been granted by the Southeastern Passenger Association from all points in the territory (South of the Ohio and East of the Mississippi rivers.)

TUESDAY, OCT. 7.—MORNING SESSION.

Registration, introduction, etc. 9 to 9:30 a. m. (or 8:30 to 9:30).

Prayer by Dr. J. G. Murray, Rector Church of Advent

Welcome Address by Mayor Hon. W. Melville Drennen.

Welcome Address by Judge James J. Banks on behalf of the Professions.

Welcome Address by Dr. R. M. Cunningham, Lieut. Gov. Elect, on behalf of Cunningham Wilson, President of Jefferson County Medical Society.

President's Address, Dr. J. C. LeGrande, Birmingham.

Reading of Papers and discussion of same. 9:30 to 12.

AFTERNOON SESSION.

Adenoids—S. I. Ledbetter, Birmingham.

Trachoma in Our Asylums and Hospitals—W. Cheatham, Louisville.

An Analysis of One Hundred Cases of Refraction with Special Reference to Headache—A. W. Sterling, Atlanta.

Purulent Ophthalmia—Frank Trester Smith, Chattanooga.

Mastoiditis—L. G. Woodson, Birmingham.

Indications for Operation in Mastoid Empyema—Samuel Kirkpatrick, Selma.

So-Called Membranous Croup—C. H. Peete, Macon, Ga.

Anesthesia—N. J. W. Peters, Birmingham.

Compound Fracture of the Skull—W. E. Wilder, Birmingham.

Localization in Fracture of the Skull—G. Manning Ellis, Chattanooga.

Gun Shot Wounds of the Abdomen with Report of Cases—R. E. Fort, Nashville.

Report of Cases—G. A. Baxter, Chattanooga.

Differential Diagnosis and Treatment of Hip Disease—W. T. Berry, Birmingham.

Gun Shot Wounds of the Liver—Wm. W. Harper, Selma, Ala.

A Case of Septicemia, Laparotomy, Described by the Patient Himself—J. C. Newman, Helenwood, Tenn.

Gastropaxy—H. Berlin, Chattanooga.

- Hernia—C. Holtzclaw, Chattanooga.
Treatment of Hernia—German P. Haymore, Chattanooga.
Treatment of Peritonitis—W. E. B. Davis, Birmingham.
Appendicitis—W. A. Sellers, Birmingham.
Appendicitis: Responsibility for Delayed Operation—W. F. Rochelle.
Jackson, Tenn.
Some Newer Methods of Hemaglobin Estimation—J. M. Mason, Birmingham.
Leucocyte Count in Appendicitis—James Brew, Nashville.
Report of a Case of Meningitis—D. S. Middleton, Rising Fawn, Ga.
Puerperal Infection—T. A. Casey, North Birmingham.
Puerperal Sepsis—J. C. Abernathy, Birmingham.
Puerperal Sepsis—E. B. Ward, Selma.
Placenta Previa with Report of Case—C. W. Hilliard, Elba, Ala.
Conservatism in Pelvic Work—W. G. Bogart, Chattanooga.
Obesity and Senility in Relation to Accidental Injuries—W. L. Gahagan, New York.
The Heroin Habit: Another Curse—Geo. E. Pettey, Memphis.
The value of State Sociological Societies in the Education and Development of the Race—R. R. Kime, Atlanta.
Dynamic Sociology—Prof. Joel DuBose, Birmingham.
Physiology of Education—J. W. McQuillan, Chattanooga.
Some Further Remarks on the Medical Supervision of the Education of Boys and Girls—D. L. Wilkinson, Montevallo, Ala.
The Negro as a Criminal and His Influence on the White Race—Louis Edelman, Huntsville, Ala.
Crime and its Causes—H. L. Appleton, Centre, Ala.
Crime: Its Causes and Evolution—Walter Lenehan, Nashville.
Mind—R. C. Bankston, Birmingham.
The Lawyer and the Doctor—Hon. Escar Floyd, Birmingham.
The Doctor and the Lawyer: The Two Professions as Factors in Shaping Events to Higher and Better Attainment—Hon. John Tomlinson, Birmingham.
The Relations Between the Physician and the Apothecary—E. N. Russell, Birmingham.
Medical Discoveries—W. L. Nolen, Chattanooga.
Treatment of Gonorrhoea—J. W. Johnson, Chattanooga.
The Successful Treatment of Gonorrhoea and Inflammatory Conditions of the Urethra by Packing with Antiseptic Oil Dressings—S. T. Rucker, Chattanooga.
The Diagnostic Value of the Cystoscope—James E. Dedman, Birmingham.

- Tuberculosis—Y. L. Abernathy, Chattanooga.
 Tuberculosis—George Brown, Atlanta.
 Tuberculosis in the Negro—Scale Harris, Union Springs, Ala.
 Veratrum Viride and Its Indications—W. A. Barrett, East Lake, Ala.
 Gelsemium—Leroy Burdeshaw, Headland, Ala.
 Case of Bright's Disease with Valvular Heart Lesions, Benefitted by
 Appocynum Cannabinum—R. B. Paine, Mandeville, La.
 Unilateral Sweating—E. Bates Block, Atlanta.
 Tetanus, Report of a Case—Frank B. Reagor, Shelbyville, Tenn.
 Diabetes Mellitus—Geo. R. West, Chattanooga.
 Cases Illustrating the Correction of Operation of Deformity Due to
 Infantile Paralysis—Michael Hoke, Atlanta.
 Curettage: Indications and Technique—Monroe Smith, Atlanta.
 A Study of 55 Fatal Cases of Pertussus—Marian McH. Hull, Atlanta.
 Rabies: Its Nature and Preventive Treatment—J. N. Brawner,
 Atlanta.
 The X Ray as a Therapeutic Measure—John W. Daniel, Savannah.
 A Duty of the Obstetrician—W. L. Champion, Atlanta.
 Report of a Case "Small Wound for Removal of Large Tumor"—B.
 G. Copeland, Birmingham.
 Report of a Case of Suturing of the Heart—L. L. Hill, Birmingham.
 The Value of Blood Examinations to the Practitioner—Frank A.
 Lupton, Birmingham.
 The Prophylaxis of Post-Operative Ventral Hernia—William D.
 Haggard, Nashville.
 Papers by H. N. Rosser, Geo. S. Brown, E. M. Robinson, B. L.
 Wyman, Wyatt Heflin, D. F. Talley, E. P. Riggs, C. Lull, R. M.
 Cunningham, of Birmingham; W. F. Westmoreland, W. S. Elkin, At-
 lanta; J. L. Hires, Savannah.

THE TREATMENT OF NEURALGIA.

That great neurologist, Romberg, declared that pain was the cry of a nerve for better blood. This remedy in an axiomatic way gives us the key to the causation of neuralgia. Neuralgia, in order that we may treat it with success, must be clearly understood, that is, we must find out the cause, and direct our therapeutic weapons to the destruction or the removal of the cause which brought the neuralgia into being. As Romberg says pain is the cry of the nerve for better blood. Now to treat neuralgia we must in all cases seek the cause or causes which have lowered the quality of the blood. Any disease, which saps the patient's strength will put the patient in a condition to make the development of neuralgia a possibility. The causes of neuralgia may

then be put down as anaemia, syphilis, lithaemia, and the exhausting effects of all acute or chronic diseases. Again the cause of neuralgia may be found to be the pressure of a tumor on the trunk of a nerve. Exostosis of the bones often interfere with blood supply of the nerve and in that way produce neuralgia. Pain—neuralgia of the face often results from exostosis of the bones of the face. These comprise in a general way the constitutional causes of neuralgia.

There must be said something of the exciting causes of this affection. Exposure to cold, heat, excessive study, great excitement, grief or joy, as well as other factors tend to produce—or rather to call into activity an attack of neuralgia. The treatment of neuralgia is best considered under two heads. First. Those measures which are directed to the removal of the constitutional factors of the causation. The second indication for treatment comprises measures which will relieve the patient's pain, and in that secure rest. In fulfilling the first indication, we shall find it important to question the patient thoroughly for information that will lead us to single out the cause which lead to the development of the neuralgia. This as said above may be anaemic, syphilis, rheumatism, lithaemia, or some disease which has lowered the general health. When we have found the cause we should at once institute proper treatment. For instance, if a patient is anaemic he should be put at once on an eligible preparation of iron. If syphilis be the cause appropriate antisyphilitic treatment must be begun and continued for a time long enough to produce good results. In a great many cases of neuralgia we will find that malaria is the principal causative agent. In those cases quinine must be given with regularity. In instances of malarial neuralgia we will find that there are regular recurrences of pain—those coming on with the regularity of an intermittent paroxysm. In those instances we should direct the quinine against the coming of the neuralgia attacks as we do an intermittent fever paroxysm. Let us now consider the best means at the disposition of the profession to relieve the pain. Manifestly it is highly important to relieve the patient's suffering as quickly as that is possible. Opium is a remedy which readily suggests itself in all cases of pain. But it is well known that opium produces constipation, indigestion, loss of appetite and a great many other disagreeable results. The danger of setting up the opium habit, too, is never to be forgotten. The coal-tar derivatives have also been employed to relieve neuralgic pain, but the fact that these agents, as Prof. Thompson says, "are one and all muscle paralyzers," is sufficient to make the prudent practitioner exhibit these agents with wise conservatism. In all cases where there is a weak heart, or where the patient is below

par physically, we should never give any of the coal-tar derivatives. We have been able to carry our point—of relieving pain in these attacks of neuralgia by giving regular doses of Daniel's Conc. Tinct. *Passiflora Incarnata*. In doses of a teaspoonful every one, two or three hours, this remedy relieves the pain, and gives the patient rest. It is not a constipating remedy like the opiates—on the other hand, however, it is a mild laxative. As an anodyne, soporific and nerve stimulant there is no remedy at the disposal of the professional more prompt, or more trustworthy than Daniel's Conc. Tinct. *Passiflora Incarnata*. It is the remedy which we now put our trust in—leaving the sedative drugs like opium and the bromides entirely out of our therapeutic armamentarium.

As yet we have said nothing of the value of heat applied over the area of the painful nerves. Hot cloths, hot salt bags and bladders of hot water will very often greatly assist us in bringing about relief of pain.

"IN MEDICINA QUALITAS PRIMA EST."

All the preparations of Wm. R. Warner & Co. are known for excellence of quality, accuracy, and uniformity of composition. The effervescent lithia water tablets furnished by this firm offer us a ready and effective method in introducing lithia into the system for the relief of the many disorders in which that remedy is of conspicuous service. The tablets are made in two strengths, one containing 3 and the other 5 grains.

Lithia water tablets promote the activity of the kidneys, increase the elimination of urea, and convert uric acid into a soluble form. These properties are an indication of their value in practical medicine. Their chief applicability is in gout and lithaemic conditions. By their instrumentality in converting deleterious products harmlessly from the system they prevent its accumulation and, consequently, the damage which its constant presence inflicts. The pernicious influence of the products of imperfect metabolism upon the kidneys, heart, and blood vessels is averted or minimized. The aggregation of insoluble and gritty particles in the form of gravel or stone is prevented by the continued use of these tablets. They will, therefore, often be efficient in saving the kidneys from disorganization and the patient from the agonies produced by the passage of a calculus. By an analogous action they obviate the formation of stone in the bladder and alleviate inflammation of that organ. These tablets are, moreover, of much service in rheumatic conditions, both articular and muscular. In the subjects of gout and rheumatism they improve digestive power,

and therefore tend to remove some of the causes of the various forms of mischief which those conditions are capable of producing throughout the body.

Warner's effervescent lithia water tablets are likewise useful in Bright's disease, acting as a diuretic and reducing albuminuria. In this manner they prevent the accumulation of toxic products. It must be recognized, from such considerations, briefly presented, that they possess a wide sphere of usefulness.—Monthly Cyclopedic of Practical Medicine.

SPONTANEOUS PULSATING EXOPHTHALMOS.

M. Mariani has observed the case of a man, 60 years of age, well nourished and, above all, free from arteriosclerosis, who, in the act of defecation, experienced a sharp pain in the left orbit. Almost immediately the conjunctiva became injected, as eyeball prominent, the lid oedematous, while a rhythmical and intermittent sound was heard in the head. On the following days, notwithstanding the application of leeches and a compressive dressing, the swelling of the lid and the projection of the eyeball were accentuated. The left cornea became somewhat opaque and caused diminution of vision. On the other, hitherto unaffected, side there developed palpebral oedema and exophthalmos. At this time, three weeks and a half after the accident, the patient entered the hospital. General examination disclosed nothing in particular. Locally, on the left side there was considerable infiltration of the eyelids, the upper one of which was vinous red in color, while there was complete ectropion of the lower lid. The eyeball projected prominently forward, a little outward, and downward; it was absolutely motionless; there was no reaction of the pupil, and the vision of that side was almost entirely lost, the eye only distinguishing light from darkness. Upon palpation there was perceived, at the upper and inner part of the orbit, a small tumor, the size of a hazel-nut, which pulsed synchronously with the radial. These pulsations were likewise perceptible in the eyeball. Auscultation recognized a continuous systolic souffle, having its maximum at the anterior portion of the cranium (frontal and both temporal bones), but perceptible over all that part of the skull and even to the shoulders and manubrium. Upon the right side almost the same signs were present, though less accentuated; the pupil, though contracted, reacted to light, and vision was preserved.

This totality of symptoms demonstrated the case to be one of pulsatile exophthalmos; an accident which is rather frequently observed after traumatism of the orbit, but which is very rarely seen to de

velop spontaneously. According to Nelaton, it is generally admitted that this affection is due to rupture of the internal carotid in its passage along the cavernous sinus, with the formation of an arteriovenous aneurism. In the present case this spontaneous rupture, in the absence of any evidence of arteriosclerosis (although the temporals were slightly sinuous), may have been favored by localized patches of atheroma. It must be recognized, also, that the intracavernous portion of the internal carotid is a veritable locus minoris resistentiae, since there exists at that point no osseous surface or muscular fibers which might to some extent support the walls of the vessel. In explanation of the pulsatile exophthalmos, involving at first only the left eye, but within a few days involving both, M. Mariani believes that there must have been a progressive dilatation of the circular sinus of Ridley, which connects the two cavernous sinuses.—*La Tribune Medicale*.

TECHNIQUE OF X-RAY THERAPY.

A thorough understanding of the fundamental principles of radiotherapy, extreme caution in all manipulations, and careful experimentation on animals, is recommended by Kienboeck (*Interstate Medical Journal*, February, 1902), for those that have occasion to use the x-rays in their practice.

The physician should use a medium soft tube, placed just above the part to be treated, and at a distance of from 15 to 20 centimeters. The portion of the skin not to be treated should be protected by a sheet of lead, 0.5 millimeter thick, under which should be placed a strip of flannel to protect the skin from flying sparks. Tubes of high intensity should be employed, with rapid interruptions, the time being varied at each sitting according to the judgment of the operator.

The tube used must be capable of producing a good picture of the thorax of a medium-sized man, when viewed through the fluoroscope 60 centimeters from the focus. With an interrupter giving interruptions at the rate of twenty to thirty a second, a good skiagram should be obtained with an exposure of thirty seconds. Although a five minutes' exposure will produce a slight effect, a radiance lasting twenty minutes may be regarded as "normal exposure." The effect of normal exposure will be about as follows: On normal skin, after a period of latency of fourteen days, the hair will fall out, accompanied by an erythema lasting a few days; on skin affected with sycosis the loss of hair will occur as early as the eighth day, accompanied by the formation of numerous pustules; lupus tissue will become exfoliated after a lapse of a week.

The effect of normal exposure of twenty minutes may be produced by dividing the action of the radiance over several sittings of shorter duration.

If there be taken into consideration the intensity of the radiance, the number of sittings, and the length of intermissions, there may be formulated these methods of x-ray therapy:

Daily sittings, with the radiance of slight intensity, lasting five minutes, continued until the first symptoms of reaction appear.

Sittings, with a radiance of medium intensity, twice a week until reaction begins to be manifest (about two weeks); or three or four sittings, with a radiance of medium intensity, given on alternate days.

The "normal exposure" in a single sitting, and await reaction.—The Therapeutic Gazette.

THE SPONGE BATH.

The sponge bath is more effectual for reducing temperature in the child than the adult. Occasionally it may not be tolerated, in which case it should not be repeated without the physician's orders. In convulsions and incipient diseases the hot bath, to which mustard is sometimes added, stimulates circulation and relieves nervous symptoms. In eruptive fevers the daily warm bath gives ease and comfort to the child, and is used by most physicians of the present day. During the time the child is in the cold bath he must be closely watched and removed at once if unfavorable symptoms develop. The temperature of this bath for a child is from 95° to 98° F., he being allowed to remain in the tub for ten minutes. The ordinary cold bath at a temperature of 70° F. is of very little use for the child. In typhoid the usual temperature for the plunge is from 75° to 80° F. For collapse the hot bath at a temperature of 105° to 110° is sometimes ordered, the child remaining in bath for one minute. This is not always successful, but is occasionally resorted to when all other remedies fail, but should never be given without the physician's order.—Trained Nurse.

SEASONABLE SUGGESTION.

Digestive disturbances so prevalent at this season and followed by Diarrhoea, Cholera Morbus and Cholera Infantum demand prompt attention and treatment. Hayden's Viburnum Compound (genuine) administered in dram doses in hot water not only corrects the existing condition but is a pronounced antispasmodic and relieves the severe pain always accompanying these cases.